

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application and for indicating the acceptance of the formal drawings filed on March 16, 1999.

Disposition of Claims

Claims 1-27 were pending in the present application. By way of this reply, claims 1-9, 11-19, 21, 23, and 25-27 are cancelled without prejudice or disclaimer. Also by way of this reply, claims 28-47 are added. Accordingly, claims 10, 20, 22, 24, and 28-47 are now pending in the present application. Claims 10, 20, 22, and 24, are independent. The remaining claims depend directly from claims 10, 20, 22, and 24.

Claim Amendments

Claims 10, 20, 22, and 24 are amended for clarification. Applicant respectfully asserts no new matter is added by way of this reply as support for these amendments may be found, for example, in paragraphs [000148], [000149], [000168], and [000172] of the specification, in the corresponding figures, and in the originally filed claims.

Rejections under 35 U.S.C. § 103

Claims 1, 10, 16, 20, 22-24, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,151,582 (hereinafter "Huang"), in view of U.S. Patent No. 6,047,293 (hereinafter "Blitz"), and further in view of the document entitled: "Object Oriented Modeling and Design" (hereinafter "Rumbaugh"). By way of this reply, claims 1, 16, 23, and 26 are cancelled and thus the rejection is moot as to those claims. As for the remaining claims, for the reasons set forth below, this rejection is respectfully traversed.

MPEP §2143 states that “[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.” In the Action, the Examiner, in articulating the analysis used to reject the claims under 35 U.S.C. §103, has described the various claimed elements taught and not taught by Huang. *See*, Action at pages 3-6. Further, the Examiner has described the various claimed elements taught by Blitz which are not taught by Huang. *Id.* Further still, the Examiner has described the various claimed elements taught by Rumbaugh which are taught by neither Huang nor Blitz. *Id.* The Examiner then concludes by asserting that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Huang to include the teachings of Blitz and Rumbaugh.

Using the above rationale, the Examiner “must articulate the following: (1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference; ...” *See*, MPEP § 2143(A). Applicant respectfully submits that the Examiner has failed to do so.

If the Examiner does not produce a *prima facie* case, Applicant is under no obligation to submit evidence of non-obviousness. The initial evaluation of *prima facie* obviousness thus relieves both the Examiner and Applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention. *See*, MPEP §2142.

It is abundantly clear that amended independent claim 10 explicitly requires, at least: (i) multiple cases and multiple scenarios be obtained; (ii) each of the multiple cases and multiple

scenarios be a simulation input file; *(iii)* a tree comprising the multiple cases and the multiple scenarios be generated; *(iv)* a parent node and corresponding child node of the tree be a case and a scenario, respectively, having identical grid geometry parameters describing an oilfield reservoir; and *(v)* a parent node and corresponding child node of the tree both be cases having different grid geometry parameters describing the oilfield reservoir. Amended independent claims 20, 22, and 24 recite similar limitations.

Huang discloses a decision support system (DSS) for managing a supply chain. The DSS includes decision frames to view the chain from different user perspectives (*i.e.*, view points), and to understand the potential effects of a user's decisions on the overall supply chain. *See*, Huang at Abstract and at column 1, lines 41-52. Huang further discloses the creation of "what-if" scenarios by a user to examine the effect of different operating parameters (*e.g.*, delivery frequency, target average inventory level, target customer service level, etc.) on the supply chain. A created scenario can be saved for and edited by other users. *See*, Huang at column 34, lines 55-65 and at column 94, lines 40-55. Huang never discusses (or even contemplates) storing the scenarios in a tree-like structure. In fact, the Examiner admits Huang fails to teach or suggest test data files being stored in the form of a hierarchical, tree like structure. *See*, Action at page 4. Accordingly, Huang fails to satisfy at least requirements *(ii)* and *(iii)* of the amended independent claims. Moreover, as Huang is clearly not directed towards oilfield reservoirs, the grid geometries of oilfield reservoirs, and the simulation of oilfield reservoirs, Huang also cannot satisfy at least the above-listed requirements *(iv)* and *(v)* of the amended independent claims.

Blitz discloses a semiconductor test system which uses multiple spreadsheets to store the data required for a test. Types of spreadsheets include pinmap spreadsheets, channel

spreadsheets, edgeset spreadsheets, and spreadsheets for other device data parameters. *See*, Blitz at column 2, lines 50-60 and column 5, lines 54-60. Blitz further discloses laying out the pinmap spreadsheet in a tree format to expedite searching. *See*, Blitz at column 6, lines 54-66 and at Figures 4 and 7. However, as the tree disclosed by Blitz is a manner of representing a pinmap spreadsheet file, it is abundantly clear that the nodes of Blitz's tree do not correspond to files themselves. Thus, Blitz, like Huang, cannot satisfy at least the above-listed requirements (ii) and (iii) of the amended independent claims. Moreover, as Blitz is clearly not directed towards oilfield reservoirs, the grid geometries of oilfield reservoirs, and the simulation of oilfield reservoirs, Blitz, like Huang, also cannot satisfy at least the above-listed requirements (iv) and (v) of the amended independent claims.

Rumbaugh discloses the concept of inheritance in object-oriented programming languages using multiple trees. *See*, Rumbaugh at page 39 and Figure 3.23. However, as the nodes of the trees disclosed by Rumbaugh are object classes and instances of object classes (*i.e.*, **not** simulation input **files**), Rumbaugh, like Blitz and Huang, cannot satisfy at least the above-listed requirements (ii) and (iii) of the amended independent claims. Moreover, as Rumbaugh is clearly not directed towards oilfield reservoirs, the grid geometries of oilfield reservoirs, and the simulation of oilfield reservoirs, Rumbaugh, like Blitz and Huang, also cannot satisfy at least the above-listed requirements (iv) and (v) of the amended independent claims.

In view of the above, Huang, Blitz, and Rumbaugh, whether viewed separately or in combination, fail to teach or suggest each and every limitation of amended independent claims 10, 20, 22, and 24. Accordingly, the Examiner's contentions and the cited prior art do not support a rejection of amended independent claims 10, 20, 22, and 24, and withdrawal of this rejection is respectfully requested.

Claims 2-9, 11-14, 17-19, 21, 25, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang, in view of Blitz, in further view of Rumbaugh, and further still in view of U.S. Patent No. 5, 835,566 (hereinafter “Cowgill”). By way of this reply, claims 2-9, 11-14, 17-19, 21, 25, and 27 are cancelled and thus the rejection is moot as to those claims. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang, in view of Blitz, in further view of Rumbaugh, in further view of Cowgill, and further still in view of U.S. Patent No. 6,018,497 (hereinafter “Gunesekara”). By way of this reply, claim 15 is cancelled and thus the rejection is moot as to claim 15. Accordingly, withdrawal of this rejection is respectfully requested.

New Claims

By way of this reply, claims 28-47 are added. Applicant respectfully asserts no new matter is added by way of new claims 28-47, as support for new claims 28-47 may be found, for example, in paragraph [000124] and [000188] of the specification, in the corresponding figures, and in the originally filed claims.

As discussed above and for at least the same reasons, the Examiner’s contentions and the cited prior art do not support a rejection of amended independent claims 10, 20, 22, and 24. Claims 28-47 depend directly from independent claims 10, 20, 22, and 24. Accordingly, the Examiner’s contentions and the cited prior art also do not support a rejection of claims 28-47. Thus, claims 28-47 are allowable.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 94.0016; 09469/157001).

Dated: December 11, 2008

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